

IN THE CLAIMS:

Amend claims 1, 2, 6, 7, 9, 12, 20, 22 and 23 and cancel claims 3, 11, 13, 17, 18 and 19 without prejudice or admission as shown in the following listing of claims, which replaces all previous listings and versions of claims.

1. (currently amended) A sector drive unit for a camera comprising:

a base plate provided with an aperture;

one or more sectors for opening and closing the aperture;

an electromagnetic actuator for driving the sectors to open and close the aperture; and

a driving force transmitting mechanism ~~for transmitting a driving force of the electromagnetic actuator to the sectors and converting a prescribed amount of angular movement of the electromagnetic actuator into a sufficient amount of movement to drive the~~ that drives the one or more sectors via a parallel link mechanism from one of an aperture-opening position and an aperture-closing position to the other of the aperture-opening position and ~~an the~~ aperture-closing position by one-pulse drive of the electromagnetic actuator.

2. (currently amended) A sector drive unit for a camera according to claim 1; wherein the electromagnetic actuator comprises a pulse motor ~~which undergoes the prescribed amount of angular movement in response to application thereto of a prescribed number of voltage or current pulses for driving the sectors to either the aperture opening position or the aperture closing position depending upon the polarity of the pulses.~~

3. (canceled)

4. (previously presented) A sector drive unit for a camera according to claim 2; wherein the pulse motor comprises a rotor having a plurality of magnetic poles, a stator having a plurality of magnetic poles, and a drive coil for driving the rotor, an angle of rotation of the rotor in response to application of one voltage or current pulse to the drive coil being defined by a relationship between positions of the magnetic poles of the rotor and positions of the magnetic poles provided on the stator.

5. (previously presented) A sector drive unit for a camera according to claim 4; wherein the positions of the magnetic poles provided on the stator are static stable positions at which the rotor is retained without the supply of power to the drive coil.

6. (currently amended) A sector drive unit for a camera according to claim 1; wherein the driving force transmitting mechanism comprises a drive gear provided on a drive shaft of the electromagnetic actuator and a sector drive gear driven by the driving gear for driving the one or more sectors.

7. (currently amended) A sector drive unit for a camera according to claim 1; further comprising a sector urging spring provided on the driving force transmitting mechanism or on a sector for urging the one or more sectors in one of the aperture-opening direction and the aperture-closing direction.

8. (previously presented) A sector drive unit for a camera according to claim 1; further comprising a case removably mounted to the base plate and containing therein the electromagnetic actuator and the driving force transmitting mechanism.

9. (currently amended) A sector drive unit for a camera according to claim 1; further comprising a sector position detecting unit for detecting when the one or more sectors are in at least one of the aperture-opening position and the aperture-closing position.

10. (previously presented) A sector drive unit for a camera according to claim 9; wherein the sector position detecting unit comprises a conductive spring element having a portion that undergoes movement with the driving force transmitting mechanism to come into and out of contact with a conductive member.

11. (canceled)

12. (currently amended) A sector drive unit for a camera comprising:

a sector unit having a base plate provided with an aperture, and one or more sectors movably mounted adjacent to the aperture for opening and closing the aperture; ~~and a sector arm for driving the one or more sectors to open and close the aperture; and~~

a pulse-driven electromagnetic actuator that produces an output motion in one direction in response to one pulse of one polarity and produces an output motion in an opposite direction in response to one pulse of opposite polarity; and

a driving force transmitting mechanism responsive to one-pulse drive of the electromagnetic actuator to drive the one or more sectors via a parallel link mechanism from one of an aperture-opening position and an aperture-closing

position to the other of the aperture-opening position and the aperture-closing position.

~~a sector driving unit having an electromagnetic actuator and a driving force transmitting mechanism for converting a rotary driving force of the electromagnetic actuator into movement of the sector arm.~~

13. (canceled)

14. (previously presented) A sector drive unit for a camera according to claim 12; wherein the sector driving unit further comprises a case removably mountable to the base plate for housing the electromagnetic actuator and the driving force transmitting mechanism.

15. (previously presented) A sector drive unit for a camera according to claim 12; wherein the sector driving unit further comprises a sector position detecting unit for detecting a position of the one or more sectors.

16. (previously presented) A sector drive unit for a camera according to claim 15; wherein the sector position detecting unit comprises a conductive spring element having a portion that undergoes movement with the driving force transmitting mechanism to come into and out of contact with a conductive member.

17. (canceled)

18. (canceled)

19. (canceled)

20. (currently amended) A sector drive unit for a camera according to claim 18~~12~~; wherein the electromagnetic actuator comprises a pulse motor ~~comprises~~ that includes a rotor having a plurality of magnetic poles, a stator having a plurality of magnetic poles, and a drive coil for driving the rotor, an angle of rotation of the rotor in response to application of a voltage or current pulse to the drive coil being defined by a relationship between positions of the magnetic poles of the rotor and positions of the magnetic poles provided on the stator.

21. (previously presented) A sector drive unit for a camera according to claim 20; wherein the positions of the magnetic poles provided on the stator are static stable positions at which the rotor is retained without the supply of power to the drive coil.

22. (currently amended) A sector drive unit for a camera according to claim 12; wherein the driving force transmitting mechanism comprises a drive gear ~~provided on a drive shaft~~ driven by of the electromagnetic actuator and a sector drive gear driven by the driving gear for driving the one or more sectors.

23. (currently amended) A sector drive unit for a camera according to claim 12; further comprising a sector urging spring provided on the driving force transmitting mechanism or on a sector for urging the one or more the sectors in one of the aperture-opening direction and the aperture-closing direction.